

CRITERIA FOR BLOOD DONOR SELECTION

OCTOBER 2015

VERSION 1

CODE: LCBT-COLL 001

GENERAL CONSIDERATIONS:

A. Age and Gender:

The lower age limit for blood donation is 18 years. Before that, blood donations are not allowed.

Between 18 and 60 years of age, all types of blood donations are allowed, except for the granulocytes collection which is allowed only before the age of 50 years. First time donors older than 60 years may be accepted at the discretion of the physician responsible of the blood transfusion center.

Prefer collection and preparation of plasma and platelet concentrates from male donors and non-immunized woman by pregnancies.

B. Donation interval:

The minimum interval between donations:

- After whole blood donation an interval of 8 weeks is required before the next whole blood, red cell or platelet donation.
- After platelet donation an interval of 48 hours is required prior to any further donation if there was satisfactory return of red blood cells during the apheresis; if not, the interval should be 8 weeks, unless the total volume of RBC loss is less than 200 ml.
- 16 weeks after a 2-unit red cell apheresis collection.

C. Donation frequency:

The number of units of packed red blood cells collected from whole blood and / or apheresis is less than or equal to six per year for men, and four per year for women with a minimum interval of 8 weeks between two consecutive donations.

The interval between two apheresis platelet donations is at least 48 hours, with a maximum of 2 donations per week, and up to 24 times per year for men and women.

The number of apheresis plasma donations is less than or equal to 24 per year for men and women.

D. Collected volume:

For whole blood donations: the total collected volume, excluding blood samples and anticoagulants, is equal to or less than 13 % of the donor's total blood volume-with a maximum of 450 ml.

For Platelet apheresis procedures: the total collected volume, excluding blood samples and anticoagulant, is equal to or less than 13 % of the donor's total blood volume-with a maximum of 650 ml.

For apheresis plasma donations: the total collected volume, excluding blood samples and anticoagulant, is equal to or less than 16 % of the donor total blood volume-with a maximum of 750 ml.

E. Clinical and biological characteristics of the donor:

1. Clinical characteristics:

During the pre-donation interview: the phlebotomist will determine if the donor, having any contraindication, is able to donate blood by asking additional questions related to these contraindications (their duration, chronicity and evolution).

The donation is not authorized if there is a risk of insufficient or inadequate response to the questionnaire due to the lack of understanding.

The prospective donor will be deferred if he/she has any of the contraindications mentioned in one of the tables in Annex II. Health authorities (MOPH) may modify, add, or remove contraindications to blood donation based on specific epidemiological situations or hemovigilance data.

Prospective donors of whole blood donations should weigh at least 50 kg to donate 450 ml \pm 10%.

Prospective donors of apheresis platelet or plasma donations should weigh at least 50 kg.

For red cells apheresis, the total blood volume of the prospective donors has to be equal to or greater than 5 liters.

2. Biological characteristics:

The hemoglobin level must be:

- 12.5 - 16 g/dl for females (Hematocrit = 38 - 48%) and 13.5 - 18 g/dl for males (Hematocrit = 40 - 54%) for any type of donation;
- 14.0 g/dl for males and females for two units red cell apheresis collection;
- 12.5 g/dl for females and 13.5 g/dl for males for plasma donations.

Below these values, the donation is left at the discretion of the physician responsible for the blood transfusion center.

For apheresis platelet donation, the donor's platelet count has to be above $150 \times 10^9/L$.

For repeated apheresis platelet donation twice a week for two consecutive weeks, the donor's total protein level has to be greater than or equal to 60 g/L.

Subsequent apheresis red cell collections may be performed only if the serum ferritin level that was measured during the first collection is greater than 20 ng/ml.

DONOR MEDICAL HISTORY I: NON-COMMUNICABLE DISEASES

1 - CARDIOLOVASCULAR	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Asymptomatic disorder: e.g. functional murmurs, mitral valve prolapse	X		
Surgically corrected simple congenital cardiac malformations		12 months after surgery	
Coronary artery disease			X
Endocarditis			X
Viral Pericarditis fully recovered		1 year	
Pericarditis: other origin			X
Angina pectoris			X
Severe cardiac arrhythmia			X
Recurrent syncope			X
Rheumatic fever with evidence of chronic heart disease			X
Acquired valvular disease with stenosis or regurgitation			X
Valve replacement			X
Hypertrophic cardiomyopathy			X
Palliated (i.e. uncorrected) congenital heart disease			X
Arterial hypertension: - Systolic Blood pressure ≥ 150 mmHg and/or - Diastolic blood pressure ≥ 100 mmHg.		X ¹	
Stable uncomplicated hypertension controlled by medication	X		
if recently started or changed anti-hypertensive medication		until 28 days after blood pressure stabilized	
if hypertensive heart or renal disease			X
History of cerebrovascular diseases			X
- Arterial thrombosis - recurrent venous thrombosis - Axillary vein thrombosis or thrombophlebitis affecting the upper limb - or Pulmonary emboli			X

¹ Recheck blood pressure after rest and verify sphygmomanometer

2 - SKIN DISEASES	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Acne	X ¹		
Allergy: - symptom free - history of anaphylaxis - possible allergy to one of the materials used during donation	X		X
Superficial burns (fully healed)	X		
Psoriasis with infected lesions, systemic symptoms, affected venipuncture site or receiving immunosuppressive or retinoid treatment			X
Vitiligo	X		
Contagious skin diseases such as scabies and ringworm		until cleared	
Herpes: - symptomatic individuals		>28 days following full recovery	
Herpes: - individuals with HHV8 infection and Current or former sexual contacts			X
Cutaneous symptoms of systemic disease or hematological malignancy: Scleroderma, systemic lupus, Kaposi,...			X
Cutaneous symptoms of infectious disease		X ²	

¹ provided venipuncture site is unaffected and patient not treated with roaccutane

² depends on the infectious agent

3 - HEMATOLOGICAL DISEASES AND MALIGNACIES	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Cancer/ Malignant diseases			
individuals with a history of malignant diseases: - Leukaemia: i.e. lymphoproliferative and myeloproliferative disorders - Lymphomas - Clonal haematological disorders such as: Polycythaemia rubra vera and essential thrombocythaemia - Paroxysmal nocturnal haemoglobinuria - Myelodysplastic syndromes			X
individuals with a history of in-situ malignant disease if they were successfully treated and regular monitored and in good health	X		
Red cells disorders			
if does not meet minimum haemoglobin level for blood donation or under investigation or on treatment for anemia		X	
Past history of iron deficiency anemia, with a known cause not a contraindication to donation, when treatment completed and fully recovered	X		
Vitamin B12 or folate deficiency when fully recovered and on maintenance treatment.	X		
thalassaemia major or sickle cell disease, inherited red cell membrane defects, G6PD deficiency			X
Chronic anemia of unknown cause or associated with systemic disease or history of hemolysis			X
Secondary erythrocytosis	X		
Polycythaemia rubra vera			X
Coagulation Disorders:			
coagulation factor deficiencies (hemophilia or other) whether inherited or acquired			X
Former sexual contacts of individuals on regular treatment with plasma-derived coagulation factors		X ¹	
Defer current sexual contacts of individuals on regular treatment with plasma-derived coagulation factors		X	
thrombocytopenia of unknown cause or associated with long- term hematological or systemic disease			X
Essential thrombocythemia			X

¹ 12 months after last sexual contact

4 - IMMUNOLOGICAL DISEASES	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Severe debilitating autoimmune disorders such as systemic lupus erythematosus, dermatomyositis or severe rheumatoid disease			X
Immunosuppression due to congenital or acquired hypogammaglobulinaemia or immunosuppressive medication			X
Rheumatic fever with No evidence of chronic heart disease		two years following the last attack	
Rheumatic fever with evidence of chronic heart disease			X

5 - GASTROINTESTINAL DISEASES	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Irritable bowel syndrome without debility	X		
Diarrhea due to irritable bowel syndrome without debility	X		
Diarrhea		X ¹	
Cholecystitis when fully recovered	X		
Diverticular disease -asymptomatic-	X		
Active inflammatory bowel disease			X
Malabsorption syndrome			X
Gallstones (asymptomatic)	X		
Mild Gastro-oesophageal reflux	X		
Hiatus hernia: mild cases, patients feeling well	X		
Peptic ulcer		X ²	

¹ 14 days after full recovery and completion of therapy, including antibiotics and 28 days if symptoms suggestive of Yersinia

² Defer until completion of treatment and full recovery

6 - RESPIRATORY DISEASES	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
severe, active, chronic or relapsing respiratory disease inclined to threaten the donor's health.			X
Asthma: asymptomatic on maintenance dose of non-steroid and/or inhaled steroid medication	X		
Asthma: full recovery from acute exacerbation and cessation of oral or injected steroids		14 days	
Bronchitis and other acute respiratory infection		14 days ¹	
Common cold		14 days ¹	
Respiratory disease: if breathless at rest or minimal exertion or if cyanosed, has severe obstructive airways disease (including if on long-term oral steroid therapy), or chronic or recurrent respiratory infection			X
Tuberculosis		2 years ²	
Contacts of individuals with tuberculosis: defer household contacts and other close contacts until screened and confirmed clear of infection		X ³	

¹ after full recovery from acute attack and completion of treatment

² Defer for 2 years following confirmation of cure

³ defer household contacts and other close contacts until screened and confirmed clear of infection

7 - METABOLIC AND ENDOCRINE DISEASES	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Benign Thyroid disorder and euthyroid (with or without treatment)	X		
- thyroid disease under investigation, - if hyper- or hypo-thyroid		X	
History of malignant thyroid tumors			X
History of thyrotoxicosis due to Graves' disease			X
Diabetes: requiring insulin treatment or has complications with multi-organ involvement.			X
Diabetes mellitus controlled by diet or oral medication provided no history of orthostatic hypotension and no evidence of infection, neuropathy, nephropathy or vascular disease	X		
Haemochromatosis provided meets other criteria	X		

8 - RENAL AND UROGENITAL TRACT DISEASES	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Individuals with chronic renal disease causing ill-health or anaemia, or associated with chronic or recurrent infection or inclined to threaten the donor's health.			X
Acute self-limiting renal diseases such as acute nephritis		X ¹	
Lower urinary tract infections		14 days	
Acute glomerulonephritis		5 years	
Gonorrhoea		X ²	
Menstruation	if feeling well		

¹ Defer until fully recovered and renal functions are normal; this may require deferral for as long as 5 years after full recovery
After full recovery from acute attack and completion of treatment

² 12 months following completion of treatment and assess for high-risk behavior

9 - CENTRAL NERVOUS SYSTEM & PSYCHIATRIC DISEASES	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Individuals with chronic neurological disease causing ill-health, or associated with chronic or recurrent infection or inclined to threaten the donor's health.			X
history of epilepsy or seizures provided off medication and seizure-free for 3 years	X		
neurodegenerative disease due to any cause			X
Multiple sclerosis or other demyelinating diseases			X
History of transient cerebral ischemic, episodes or stroke			X
Depression (if feeling well)	X		
Dementia			X
Anxiety disorder or mood disorder provided in generally good health, not obviously over-anxious, depressed or manic on the day of donation, regardless of medication	X		
Psychotic disorder requiring maintenance treatment			X

10 - MUSCULOSKELETAL DISORDERS	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Back pain - Sciatica - Frozen shoulder - Osteoarthritis provided these conditions do not inhibit their daily routine activities and they are able to climb on and off a donation couch without assistance	X		
Individuals with fractures (without surgery)		until plaster or external fixation is removed and they are fully mobile	
Rheumatoid disease			X
Psoriatic arthropathy			X
Ankylosing spondylitis			X
Arthritis: Severe debilitating autoimmune disorders such as systemic lupus erythematosus, dermatomyositis or severe rheumatoid disease			X
Osteomyelitis		two years following treatment.	

DONOR MEDICAL HISTORY II: MEDICAL AND SURGICAL INTERVENTIONS

11 - SURGERY AND INVASIVE PROCEDURES AND EXPOSURE TO BIOHAZARDOUS MATERIAL	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Invasive diagnostic or cosmetic procedures using <ul style="list-style-type: none"> - flexible endoscopy, - inoculation injury, - acupuncture, - tattoos, - body piercing, or - any other invasive cosmetic procedures, and mucous membrane exposure to blood. 		12 months	
Major surgery		12 months	
Neurosurgical procedure			X
Cancer Surgery			X
Pregnancy (delivery or termination of pregnancy) and lactation		12 months	
Dental treatment: <ul style="list-style-type: none"> - Simple procedures (decay) - Endodontic procedures (root canal therapy) or extraction 		24 hours 7 days.	
Fracture (without surgery)		until plaster or external fixation is removed and they are fully mobile	
Blood Transfusion		12 months	
Transplantation: <ul style="list-style-type: none"> - Stem cell or organ transplantation, - Dura mater graft, - corneal transplant - xenograft 			X
Lithotriptic and Laser Therapy	If asymptomatic		

12 - DRUGS AND MEDICATION	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Individuals who have taken Etreinate (Tegison)			X
Individuals treated with human pituitary-derived growth hormone because of case reports of transmission of iatrogenic Creutzfeldt-Jakob			X
Antibiotics for acute infections:		X ¹	
long-term antibiotics for acne	X		
Systemic corticotherapy		two weeks after cessation of symptoms and after cessation of corticotherapy	
Aspirin:		48 hours for Whole blood 5 days for platelet donor	
Other NSAIDs		48 hours	
Acitretin(Soriatane)		3 years	
Isotretinoin		28 days	
Finasteride (Proscar,propecia) isotretinoin (Accutane, Amnesteem, Claravis, Sotret)		28 days	

¹ defer for 14 days after completion of treatment, 7 days after antibiotic withdrawal and 14 days after disappearance of symptoms

NOTE: Taking a medication may indicate an underlying disease which may disqualify the donor. It is recommended that a list of commonly used drugs, approved by the transfusion center director, be available.

- Individuals taking prescribed treatment with injected medications, including self-administration, based on the underlying condition for which the medication is taken
- Donors treated with prescribed drugs, particularly those with proven teratogen effect, should be deferred for a period consistent with the pharmacokinetic properties of the drug.

Polytherapy could reveal a serious underlying disease that could be a contraindication for donation

13 - IMMUNIZATIONS AND VACCINATIONS	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Live attenuated viral and bacterial vaccines: including hepatitis A, Japanese encephalitis, influenza, measles, mumps, rubella, polio (oral), smallpox and yellow fever. Bacterial vaccines include BCG, cholera and typhoid		28 days	
Inactivated vaccines: non-live vaccines and toxoids (cholera, diphtheria toxoid, human papillomavirus (HPV), influenza, meningococcal meningitis, pertussis, pneumococcal, polio (injected, tetanus toxoid, tick-borne encephalitis and typhoid) with no history or known exposure and who feel well	X		
for HBV vaccine: Individuals with no known exposure to hepatitis B who have recently received routine vaccination		14 days	
Rabies: Individuals who have received rabies post-exposure prophylaxis with vaccine and/or immunoglobulin		12 months after exposure	

TTI AND DONOR RISK ASSESSMENT

1 - INFECTIONS	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Fever (non-specific)		14 days following full recovery	
Creutzfeldt-Jakob Disease: - Individuals with sporadic or familial CJD - First-degree relatives of individuals with sporadic or familial CJD - Individuals with vCJD - Individuals who have received a transfusion or any other human-derived therapeutic products since 1980 in a country in which the risk of vCJD has been identified - Individuals with a history of treatment with pituitary-derived human growth hormone, human gonadotrophin, dura mater graft, corneal transplant or neurosurgery - Individuals who have spent one year cumulatively in the UK between 1980 and the end of 1996			X
Babesiosis			X
Brucellosis			X
Campylobacter		28 days following full recovery	
Individuals who have ever had a diagnosis of Chagas disease			X
Individuals with an identified risk of Chagas disease: - Born in, resided in for 6 months or more, or have mother or maternal grandmother born in an endemic area - Received blood transfusion or organ transplant in an endemic area - Travel for 28 days or more in a rural community in an endemic area			X
Chickenpox		14 days following full recovery	
Defer Individuals in close contact with patients having active chickenpox and who are asymptomatic		21 days following last day of close contact	
Chikungunya virus: Individuals with a history of dengue or chikungunya virus		6 months following full recovery	
Chikungunya virus : Individuals who have visited an area endemic for dengue or chikungunya:		28 days following return	
Chikungunya virus : Individuals who have suffered a febrile illness during or following return from an endemic region		6 months following full recovery from infection	
Epstein-Barr virus (mononucleosis)		28 days following full recovery	
History of jaundice or hepatitis after 11th birthday			X
Hepatitis A, hepatitis E and hepatitis of unknown origin		12 months following full recovery	

1 - INFECTIONS	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Sexual contacts, household and other close contacts of individuals with HAV, HEV or hepatitis of unknown origin		12 months since last contact	
Hepatitis B: Individuals with current or past HBV infection			X
Hepatitis B: - Current sexual and household contacts of individuals with active HBV infection - Former sexual contacts of individuals with active HBV infection - Former household contacts of individuals with active HBV infection - Health workers who have suffered an inoculation or mucosal injury - individuals who have received hepatitis B post-exposure prophylaxis with vaccine and/ or immunoglobulin		12 months since last contact or exposure	
Hepatitis C: Current or past HCV infection			X
Hepatitis C: - Former sexual contacts of individuals with HCV infection - Health workers who have suffered an inoculation or mucosal injury - Current sexual and household contacts of individuals with active HCV infection		12 months since last contact or exposure	
Herpes: symptomatic		at least 28 days following full recovery	
individuals with HHV8 infection and current or former sexual contacts			X
Individuals with present or past clinical or laboratory evidence of HIV infection			X
Current sexual contacts of individuals with HIV infection and Former sexual contacts of individuals with HIV infection		12 months since last sexual contact or exposure	
- Current sexual contacts of individuals with HTLV I and/or II infection - Former sexual contacts of individuals with HTLV I and/or II infection		12 months since last sexual contact or exposure	
- Individuals with HTLV I and/or II infection - Individuals whose mother or maternal grandmother has or had HTLV I and/or II infection, - Former sexual contacts of individuals with HTLV I and/or II infection, if blood screening for HTLV I and/or II infection is not available			X
Influenza: Asymptomatic household contacts and other close contacts of symptomatic individuals with active infection		7 days after last day of close contact	
Influenza: Symptomatic individuals with active infection		for 14 days after full recovery and cessation of any therapy	
History of Leishmania			X
Lyme disease		X ¹	

1 - INFECTIONS	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
<p>Malaria:</p> <ul style="list-style-type: none"> - Individuals who have lived in a malaria endemic area for a continuous period of 6 months or more - Prospective donors who have had a diagnosis of malaria - Individuals who have reported a history of an undiagnosed febrile illness consistent with malaria during or within the 6 months after visiting a malaria endemic area - Individuals who were born or have lived in a malaria endemic area during the first 5 years of life 			X
Individuals who have been to malaria endemic areas less than 15 days and who have had no symptoms		X ²	
Individuals who have been to malaria endemic areas for a period of 15 days to 6 months and who have had no symptoms		X ³	
<ul style="list-style-type: none"> - Measles - Mumps - Rubella 		Defer for 14 days following full recovery	
Individuals in close contact with patients having active measles, mumps or rubella, and who are asymptomatic		Defer for 21 days following last day of close contact	
Rickettsial infection and Rocky mountain spotted fever		for 6 months following completion of treatment or cessation of symptoms	
Salmonella infection		X ¹	
Streptococcus infection		X ⁴	
Syphilis: if had ever has a diagnosis of syphilis			X
<p>Syphilis:</p> <ul style="list-style-type: none"> - Current sexual contacts of individuals with syphilis - Former sexual contacts of individuals with syphilis - Individuals with gonorrhoea Current sexual contacts of individuals with gonorrhea - Former sexual contacts of individuals with gonorrhoea 		X ⁵	
<ul style="list-style-type: none"> - Individuals with sporadic or familial CJD - First-degree relatives of individuals with sporadic or familial CJD - Individuals with vCJD - Individuals who have received a transfusion or any other human-derived therapeutic products since 1980 in a country in which the risk of vCJD has been identified - Individuals with a history of treatment with pituitary-derived human growth hormone, human gonadotrophin, dura mater graft, corneal transplant or neurosurgery 			X
West Nile virus: Individuals who have visited an area endemic for West Nile virus with human cases		28 days	

1 - INFECTIONS	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Individuals who have known West Nile virus infection or symptoms suggestive of WNV		6 months	
Q fever		2 years after full recovery	
Chronic Q fever			X
Toxoplasmosis		6 months	
Tuberculosis		2 years following confirmation of cure	
Household contacts and other close contacts of individuals with tuberculosis		until screened and confirmed clear of infection	
Fever above 38°C, flu-like illness And Minor illnesses (e.g. general malaise, pain, fever, headache,cough, diarrhea)		defer for 14 days after full recovery from acute infection and completion of antibiotic treatment	

¹ Defer for 28 days following full recovery and completion of treatment, whichever is longer

² Defer for 12 months from last return from a malaria endemic area.

³ Defer for 3 years from last return from a malaria endemic area.

⁴ Defer for 28 days following full recovery or Defer for 14 days following full healing if recent superficial but significant wounds

⁵ Defer for 12 months since last sexual contact or following completion of treatment and assess for high-risk behavior

2 - HIGH RISK BEHAVIOR	ACCEPT DONATION	TEMPORARY DEFERRAL	PERMANENT DEFERRAL
Sexual contact with an individual who had many partners in the last 4 months.		12 months	
Current sexual contact with drug users (steroids, doping) with unknown HIV and hepatitis B status.		12 months	
Sexual contact with an individual who has a positive serology for HIV, HCV, or HBV.		12 months	
Sexual contact with an individual who has a recent sexually transmitted disease or under treatment.		12 months	
Sexual contact with an individual who has HIV/AIDS infection or has had a positive test for the HIV/AIDS virus.		12 months	
Sexual contact with a prostitute or anyone else who takes money or drugs or any other payment for sex.		12 months	
Sexual contact with anyone who has ever used needles to take drugs or steroids or anything not prescribed by their doctor.		12 months	
Sexual contact with anyone who has hemophilia or has used clotting factor concentrates.		12 months	
Female donors: Sexual contact with a male who had sexual contact with another male.		12 months	
Male donors: Sexual contact with another male, even once.			X
Drug use			X
Alcohol intake if no signs of intoxication	X ¹		
Sex workers			X
Inmates of prisons and penal institutions		12 months	

¹ For platelet donation defer for 12 hours post consumption

TABLE OF COUNTRIES THAT ARE UNDER RESTRICTIVE MEASURES FOR BLOOD DONATION BECAUSE OF THE RISK

COUNTRY	GEOGRAPHICAL ZONE	MALARIA	WNV	CHICKUNGUNYA	CHAGAS	DENGUE
Azores	Atlantic Ocean	No	No	No	No	No
Afghanistan	Asia	Yes	No	No	No	No
South Africa	Africa	Yes	No	No	No	No
Albania	Europe	No	No	No	No	No
Germany	Europe	No	No	No	No	No
Andorra	Europe	No	No	No	No	No
Angola	Africa	Yes	No	No	No	No
Anguilla	Caribbean	No	No	No	No	No
Antigua & Barbuda	Caribbean	No	No	No	No	No
Antilles Netherlands	Caribbean	No	No	No	No	No
Saudi Arabia	Asia	Yes	No	No	No	No
Argentina	South America	Yes	No	No	Yes	No
Armenia	Asia	No	No	No	No	No
Aruba	Caribbean	No	No	No	No	No
Australia	Oceania	No	No	No	No	No
Austria	Europe	No	No	No	No	No
Azerbaijan	Asia	No	No	No	No	No
Bahamas	Caribbean	No	No	No	No	No
Bahraini	Asia	Yes	No	No	No	No
Bali	Oceania	No	No	No	No	No
Bangladesh	Asia	Yes	No	No	No	No
Barbados	Caribbean	No	No	No	No	No
Palau	Oceania	No	No	No	No	No
Belgium	Europe	No	No	No	No	No
Belize	Central America	Yes	No	No	Yes	No
Benin	Africa	Yes	No	No	No	No
Bermuda	North America	No	No	No	No	No
Bhutan	Asia	Yes	No	No	No	No
Belarus	Europe	No	No	No	No	No
Burma (Myanmar)	Asia	Yes	No	No	No	No
Bolivia	South America	Yes	No	No	Yes	No
Borneo	Asia	No	No	No	No	No
Bosnia Herzegovina	Europe	No	No	No	No	No
Botswana	Africa	Yes	No	No	No	No
Brazil	South America	Yes	No	No	Yes	No
Brunei	Asia	No	No	No	No	No
Bulgaria	Europe	No	No	No	No	No
Burkina-Faso	Africa	Yes	No	No	No	No
Burundi	Africa	Yes	No	No	No	No
Cayman (island)	Caribbean	No	No	No	No	No
Cambodia	Asia	Yes	No	No	No	No
Cameroun	Africa	Yes	No	No	No	No
Canada	North America	No	No	No	No	No
Canary	Atlantic Ocean	No	No	No	No	No
Cape Verde	Africa	No	No	No	Yes	No
Celebes	Asia	Yes	No	No	No	No
Chili	South America	No	No	No	Yes	No

COUNTRY	GEOGRAPHICAL ZONE	MALARIA	WNV	CHICKUNGUNYA	CHAGAS	DENGUE
China	Asia	Yes	No	No	No	No
Cyprus	Europe	No	No	No	No	No
Colombia	South America	Yes	No	No	Yes	No
Comoros	Indian Ocean	Yes	No	Yes	No	No
Congo	Africa	Yes	No	No	No	No
Cook	Oceania	Yes	No	No	No	No
North Korea	Asia	No	No	No	No	No
South Korea	Asia	No	No	No	No	No
Costa Rica	Central America	Yes	No	No	Yes	No
Ivory Coast	Africa	Yes	No	No	No	No
Croatia	Europe	No	No	No	No	No
Cuba	Caribbean	No	No	No	No	No
Denmark	Europe	No	No	No	No	No
Djibouti	Africa	Yes	No	No	No	No
Dominique (island)	Caribbean	No	No	No	No	No
Dubai	Asia	No	No	No	No	No
Egypt	Africa	No	No	No	No	No
United Arab Emirates	Asia	No	No	No	No	No
Ecuador	South America	Yes	No	No	Yes	No
Eritrea	Africa	Yes	No	No	No	No
Spain	Europe	No	No	No	No	No
Estonia	Europe	No	No	No	No	No
United States	North America	No	No	No	No	No
Ethiopia	Africa	Yes	No	No	No	No
Fiji	Oceania	No	No	No	No	No
Finland	Europe	No	No	No	No	No
France	Europe	No	No	No	No	No
Gabon	Africa	Yes	No	Yes	No	No
Gambia	Africa	Yes	No	No	No	No
Georgia	Europe	No	No	No	No	No
South Georgia	South America	No	No	No	No	No
Ghana	Africa	Yes	No	No	No	No
Greece	Europe	No	No	No	No	No
Grenada (island)	Caribbean	No	No	No	No	No
Greenland	North America	No	No	No	No	No
Guadeloupe (island)	Caribbean	No	No	No	No	No
Guam	Oceania	No	No	No	No	No
Guatemala	central America	Yes	No	No	Yes	No
Equatorial Guinea	Africa	Yes	No	No	No	No
Guinea-Bissau	Africa	Yes	No	No	No	No
Guyana	South America	Yes	No	No	Yes	No
Haiti	Caribbean	Yes	No	No	No	No
Hawaii	Oceania	No	No	No	No	No
Honduras	Central America	Yes	No	No	Yes	No
Hong Kong	Asia	No	No	No	No	No
Hungary	Europe	No	No	No	Yes	No
India	Asia	Yes	No	Yes	No	No
Indonesia except Bali	Oceania	Yes	No	No	No	No

COUNTRY	GEOGRAPHICAL ZONE	MALARIA	WNV	CHICKUNGUNYA	CHAGAS	DENGUE
Iran	Asia	Yes	No	No	No	No
Iraq	Asia	Yes	No	No	No	No
Ireland	Europe	No	No	No	No	No
Iceland	Europe	No	No	No	No	No
Israel	Asia	No	No	No	No	No
Italy	Europe	No	No	No	No	No
Jamaica	Caribbean	Yes	No	No	No	No
Japan	Asia	No	No	No	No	No
Jordan	Asia	No	No	No	No	No
Kazakhstan	Asia	No	No	No	No	No
Kenya	Africa	Yes	No	No	No	No
Kirghizstan	Asia	No	No	No	No	No
Kiribati	Oceania	No	No	No	No	No
Kuwait	Asia	No	No	No	No	No
La Reunion	Indian Ocean	No	No	No	No	No
Laos	Asia	Yes	No	No	No	No
Lesotho	Africa	No	No	No	No	No
Latvia	Europe	No	No	No	No	No
Lebanon	Asia	No	No	No	No	No
Liberia	Africa	Yes	No	No	No	No
Libya	Africa	No	No	No	No	No
Liechtenstein	Europe	No	No	No	No	No
Lithuania	Europe	No	No	No	No	No
Luxembourg	Europe	No	No	No	No	No
Macao	Asia	No	No	No	No	No
Macedonia	Europe	No	No	No	No	No
Madagascar	Indian Ocean	No	No	No	No	No
Madeira	Africa	No	No	No	No	No
Malaysia	Asia	Yes (except Brunei and Singapore)	No	Yes	No	No
Malawi	Africa	Yes	No	No	No	No
Maldives	Indian Ocean	No	No	No	No	No
Mali	Africa	Yes	No	No	No	No
Falklands (island)	South America	No	No	No	No	No
Malta	Europe	No	No	No	No	No
Marianna	Oceania	No	No	No	No	No
Morocco	Africa	No	No	No	No	No
Marshall	Oceania	No	No	No	No	No
Martinique (island)	Caribbean	No	No	No	No	No
Mauritius (island)	Indian Ocean	No	No	Yes	No	No
Mauritania	Africa	Yes	No	No	No	No
Mayotte	Indian Ocean	Yes	No	No	No	No
Mexico	Central America	Yes	No	No	Yes	No
Micronesia	Oceania	No	No	No	No	No
Moldova	Europe	No	No	No	No	No
Monaco	Europe	No	No	No	No	No
Mongolia	Asia	No	No	No	No	No
Montserrat	Caribbean	No	No	No	No	No
Montenegro	Europe	No	No	No	No	No
Mozambique	Africa	Yes	No	No	No	No

COUNTRY	GEOGRAPHICAL ZONE	MALARIA	WNV	CHICKUNGUNYA	CHAGAS	DENGUE
Myanmar (Burma)	Asia	Yes	No	No	No	No
Namibia	Africa	Yes	No	No	No	No
Nauru	Oceania	No	No	No	No	No
Nepal	Asia	Yes	No	No	No	No
Nicaragua	Central America	Yes	No	No	Yes	No
Niger	Africa	Yes	No	No	No	No
Nigeria	Africa	Yes	No	No	No	No
Niue	Oceania	No	No	No	No	No
Norfolk	Oceania	No	No	No	No	No
Norwalk	Europe	No	No	No	No	No
New Caledonia	Oceania	No	No	No	No	No
New Zealand	Oceania	No	No	No	No	No
Oman	Asia	No	No	No	No	No
Uganda	Africa	Yes	No	No	No	No
Uzbekistan	Asia	No	No	No	No	No
Pakistan	Asia	Yes	No	No	No	No
Palau (Belau)	Oceania	No	No	No	No	No
Panama	Central America	Yes	No	No	Yes	No
Papua-New guinea	Oceania	Yes	No	No	No	No
Easter Island	Oceania	No	No	No	No	No
Paraguay	South America	Yes	No	No	Yes	No
Netherlands	Europe	No	No	No	No	No
Peru	South America	Yes	No	No	Yes	No
Philippines	Indian Ocean	Yes	No	No	No	No
Pitcairn	Oceania	No	No	No	No	No
Poland	Europe	No	No	No	No	No
French Polynesia	Oceania	No	No	No	No	No
Puerto Rico	Caribbean	No	No	No	No	No
Portugal	Europe	No	No	No	No	No
Qatar	Asia	No	No	No	No	No
Central African Republic	Africa	Yes	No	No	No	No
Democratic Republic of Congo	Africa	Yes	No	No	No	No
Dominican Republic	Caribbean	Yes	No	No	No	No
Czech Republic	Europe	No	No	No	No	No
Reunion (island)	Indian Ocean	No	No	No	No	No
Romania	Europe	No	No	No	No	No
United Kingdom	Europe	No	No	No	No	No
Russia	Europe	No	No	No	No	No
Rwanda	Africa	Yes	No	No	No	No
Saint Barthelemy	Caribbean	No	No	No	No	No
Saint Martin	Caribbean	No	No	No	No	No
Saint-Christophe and Nevis	Caribbean	No	No	No	No	No
Saint Helena	Africa	No	No	No	No	No
Saint -Lucia	Caribbean	No	No	No	No	No
San Marino	Europe	No	No	No	No	No
Holy See (Vatican)	Europe	No	No	No	No	No

COUNTRY	GEOGRAPHICAL ZONE	MALARIA	WNV	CHICKUNGUNYA	CHAGAS	DENGUE
Saint Vincent and the Grenadines	Caribbean	No	No	No	No	No
Solomon	Oceania	Yes	No	No	No	No
Salvador	Central America	Yes	No	No	Yes	No
Western Samoa	Oceania	No	No	No	No	No
Sandwich	South America	No	No	No	No	No
Sao Tome & Principe	Africa	Yes	No	No	No	No
Senegal	Africa	Yes	No	No	No	No
Serbia	Europe	No	No	No	No	No
Seychelles	Indian Ocean	No	No	Yes	No	No
Sierra Leone	Africa	Yes	No	No	No	No
Singapore	Asia	No	No	Yes	No	No
Slovakia	Europe	No	No	No	No	No
Slovenia	Europe	No	No	No	No	No
Somalia	Africa	Yes	No	No	No	No
Soudan	Africa	Yes	No	No	No	No
Sri Lanka	Asia	Yes	No	Yes	No	No
Sweden	Europe	No	No	No	No	No
Suisse	Europe	No	No	No	No	No
Sumatra	Asia	No	No	No	No	No
Suriname	South America	Yes	No	No	Yes	No
Swaziland	Africa	Yes	No	No	No	No
Syria	Asia		No	No	No	No
Tajikistan	Asia	Yes	No	No	No	No
Taiwan	Asia		No	No	No	No
Tanzania	Africa	Yes	No	No	No	No
Chad	Africa	Yes	No	No	No	No
Thailand	Asia	Yes	No	No	No	No
Timor-Leste	Oceania	Yes	No	No	No	No
Togo	Africa	Yes	No	No	No	No
Tokelau	Oceania		No	No	No	No
Tonga	Oceania	No	No	No	No	No
Trinidad and Tobago	South America	No	No	No	No	No
Tunisia	Africa	No	No	No	No	No
Turkmenistan	Asia	No	No	No	No	No
Turks and Caicos	Caribbean	No	No	No	No	No
Turkey	Asia	No	No	No	No	No
Tuvalu	Oceania	No	No	No	No	No
Ukraine	Europe	No	No	No	No	No
Uruguay	South America	No	No	No	Yes	No
Vanuatu	Oceania	Yes	No	No	No	No
Venezuela	South America	Yes	No	No	Yes	No
Virgin (island)	Caribbean	Yes	No	No	Yes	No
Vietnam	Asia	Yes	No	No	No	No
Wallis & Futuna	Oceania		No	No	No	No
Yemen	Asia	Yes	No	No	No	No
Yugoslavia	Europe		No	No	No	No
Zambia	Africa	Yes	No	No	No	No
Zimbabwe	Africa	Yes	No	No	No	No

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